WIX1002 Fundamentals of Programming
Lab 2: Java Fundamental

1. Write a program that convert the temperature in degree Fahrenheit to degree Celsius. The program will display the degree Celsius in two decimal places.

    Celsius = (Fahrenheit – 32) / 1.8

2. Write a program to calculate the monthly payment for car loan. The following are the inputs of the program. Output the monthly payment in two decimal places.

P	The price of the car
D	Down payment
R	Interest Rate in %
Y	Loan duration in year
M	Monthly Payment

    M = (P – D) * (1 + R*Y/100) / (Y *12)

3. Write a program that generates three random numbers. The range of the random number is 10 to 50. Display the three numbers, sum of the numbers and the average in two decimal places.

4. Write a program that converts the seconds to hours, minutes and seconds.

    Enter the number of seconds: 123456
    123456 seconds is 34 hours, 17 minutes and 36 seconds

5. Write a program that generates one random number. The range of the random number is 0 to 10000. Display the number and the sum of all the digits in the number.

6. Write a program that calculates the energy needed to heat water.

    Q = M * (final temperature – initial temperature) * 4184

    M = Weight of water in kg
    Q = Energy in joules
    The temperature are in degree Celsius

    Enter the amount of water in gram: 55500
    Enter the initial temperature in Fahrenheit: 38.3
    Enter the final temperature in Fahrenheit: 50.9
    The energy needed is 1.625484e+06